

93. Macroscopic amounts of an allotrope of carbon consisting solely of carbon atoms, and soluble in non-polar solvents, which allotrope of carbon is neither graphite nor diamond, and which allotrope of carbon is isolated from a sooty carbon product formed from vaporizing elemental carbon in the presence of an inert quenching gas.

94. An allotrope of carbon consisting solely of carbon atoms isolated as a visible solid, which allotrope of carbon is neither graphite nor diamond.

95. A substantially pure product of any one of Claims 89-94.

96. A substantially pure crystalline product of any one of Claims 89-94.

97. A caged carbon allotrope consisting solely of carbon atoms that is isolated from a sooty carbon product formed from the vaporization of elemental carbon in the presence of an inert quenching gas as a visible product, said allotrope of carbon being neither graphite nor diamond, and said allotrope of carbon being soluble in non-polar organic solvents.

98. A solid carbon product prepared by the process comprising:

(a) vaporizing elemental carbon in the presence of an inert quenching gas under conditions effective to provide a sooty carbon product comprising fullerene molecules;

(b) depositing the sooty carbon product on a collecting substrate;

(c) removing the sooty carbon product from the collecting substrate;

(d) contacting the sooty carbon product with a non-polar organic solvent effective to dissolve the fullerene molecules in said sooty carbon product; and